

In the Claims:

Claims pending

- At time of the Action: 1-2, 4-5, 9-10, 13 and 33-47.
- After this Response: Claims 9, 10, 35-38 and 48-52.

Currently Amended claims: 9.

Currently Cancelled claims: 1, 2, 4, 5, 13, 33, 34, 39, 40, and 44-47.

Currently Withdrawn claims: 41-43.

New claims: 48-52.

This listing of claims will replace all prior versions and listings of claims in the application:

1. - 8. (Cancelled).

9. (Currently amended) A reactive filtration method, comprising continuously regenerating an iron oxide coated sand bed under aerobic conditions while simultaneously filtering contaminants from waste water flowing through the sand bed.

10. (Previously Presented) The method of claim 9, wherein regenerating the sand bed comprises agitating a mixture of iron granules and sand.

1
2 11.-34. (Cancelled).
3

4 35. (Previously presented) The method of claim 9, wherein the
5 continuously regenerating comprises regenerating reactive surfaces on the iron
6 oxide coated sand bed to which contaminants can bond.
7

8 36. (Previously presented) The method of claim 9, wherein the filtering
9 comprises filtering solid forms of the contaminants and wherein the continuously
10 regenerating comprises regenerating reactive surfaces on the iron oxide coated
11 sand bed to which dissolved contaminants can bond.
12

13 37. (Previously presented) The method of claim 36, further comprising
14 removing at least a portion of the bonded and filtered contaminants from a vessel
15 that defines the sand bed.
16

17 38. (Previously presented) The method of claim 37, wherein the
18 removing further comprises removing the portion from a majority of the water.
19

20 39. - 40. (Cancelled).
21

22 41. (Withdrawn) A method comprising continuously regenerating a filter
23 media by abrading the filter media sufficient to allow surface sites on the filter
24
25

media to be available for reacting with a chemical reagent, while simultaneously filtering contaminants from fluid flowing through the filter media.

42. (Withdrawn) The method of claim 41, wherein the abrading scours the chemical reagent and compounds containing the reagent and the contaminants from the filter media.

43. (Withdrawn) The method of claim 41, further comprising introducing the chemical reagent into the fluid.

44. -- 47. (Cancelled).

48. (New) A method comprising:

introducing iron oxides into water supplied to a moving bed media filter effective to precipitate contaminants from the water and to form iron oxide coated media surfaces in the media bed;

simultaneously filtering the precipitated contaminants with the sand and sorbing other contaminants to the iron oxide coated sand surfaces;

abrading sorbed contaminant-iron solids from the surfaces;

separating the precipitated and sorbed contaminants from the media; and,

continuously introducing additional iron oxides to the media bed sufficient to regenerate the iron oxide coated media surfaces.

1 49. (New) The method of claim 9, wherein the regenerating the sand bed
2 comprises introducing an iron salt reagent into the waste water flowing through
3 the sand bed and agitating the sand.

4
5 50. (New) The method of claim 49, wherein the introducing an iron salt
6 reagent comprises introducing a salt of Fe(II) or Fe(III).

7
8 51. (New) The method of claim 48, wherein the introducing iron oxides
9 into water comprises introducing iron salts into the water in sufficient quantities to
10 react with available water chemistries to form the iron oxides in quantities
11 effective to precipitate a majority of the contaminants and to form the iron oxide
12 coated media surfaces without significantly increasing iron concentrations of
13 effluent water obtained from the media bed.

14
15 52. (New) A system comprising:

16 a media bed;

17 a mechanism for removing media from a lower portion of the media bed
18 and abrading iron oxide-contaminant solids from media surfaces while recycling
19 the media to an upper portion of the media bed; and,

20 a mechanism for introducing water containing contaminants and iron
21 oxides into an intermediate portion of the media bed so that the water flows
22 upwardly through the media bed and emerges through the upper portion effective
23 that iron oxide concentrations are highest proximate the intermediate portion and
24 approach background levels as the water emerges from the upper portion effective
25

1 that a majority of the media surfaces are exposed to iron oxides as the media
2 approaches the intermediate portion.
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25